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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,957	12/22/2005	Tsuyoshi Nishizawa	126273	3542
25944 7590 09/27/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER MALEKZADEH, SEYED MASOUD	
			ART UNIT 1722	PAPER NUMBER
			MAIL DATE 09/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,957

Applicant(s)

NISHIZAWA, TSUYOSHI

Examiner

SEYED MALEKZADEH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-27 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 16-27 and 29-31 are pending.

Claims 28 and 32-36 are cancelled.

In view of amendment filed on July 3rd, 2007 following rejections/objections are withdrawn from the previous office action for the reason of record.

- Rejection of claims 28 and 32 under 35 U.S.C. 102(b) as being anticipated by Nam et al. (US 5,527,565)
- Rejection of claims 33-36 under 35 U.S.C. 103(a) as being unpatentable over Standley et al. (WO 01/86035) in view of Sato et al (6,593,211)

The following rejections/objections are maintained for the reason of records as given in the previous office action, mailed on April 3rd, 2007.

- Rejection of claims 16-27 and 29-31 under 103(a) as being unpatentable over Standley et al. (WO 01/86035) in view of Sato et al (6,593,211). Further, Standley et al.

('035) teach the new limitation of amended claim 1.

Standley et al. ('035) teach, "The silicon single crystal substrate mounted on a spot face of the susceptor." (See lines 10-15, page 8)

Response to Argument

Applicants' arguments filed on July 3rd, 2007 have been fully considered but they are not persuasive.

Applicants argue Standley (WO 01/86035) does not teach or suggest a method for producing a silicon epitaxial wafer in which a silicon single crystal substrate is separated from susceptor during the hydrogen heat treatment step, and the silicon single crystal substrate is mounted on a spot face of the susceptor during a vapor phase epitaxy step, as recited in independent claim 16.

This is not found persuasive. However Standley et al (WO 01/86035) fails to teach a hydrogen heat treatment step, Standley et al ('035) clearly teach a method of producing a silicon epitaxial wafer in which a silicon single crystal substrate is separated from a susceptor, and the silicon single crystal substrate is mounted on a spot face of the susceptor during a vapor phase epitaxy step. (See page 7, lines 3-23 and

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page 8, lines 6-31) Furthermore, Applicants attention is drawn to the point that Standley et al (WO 01/86035) has not been used alone, but it is a combination rejection made over Standley et al (WO 01/86035) in view of Sato et al (6,593,211) and combined teaching of Standley et al (WO 01/86035) in view of Sato et al (6,593,211) clearly teach all the limitations of claim 16

Further, applicants argue that Standley et al (WO 01/86035) does not teach or suggest the cleaning process as recited in claim 29, in which a front main surface oxide film formation cleaning for forming an oxide film on a front main surface, and rear main surface natural oxide film removal cleaning for removing a natural oxide film formed on a rear main surface of the silicon single crystal substrate is performed as final cleaning of the rear main surface.

This is not found persuasive because Standley et al (WO 01/86035) clearly teach a front main surface oxide film formation cleaning for forming an oxide film on a front main surface, and rear main surface natural oxide film removal cleaning for removing a natural oxide film formed on a rear main surface of the silicon single crystal substrate is performed as final cleaning of the rear main surface. (See lines 6-15 page 2, and lines 24-33 page 7). Furthermore, Applicants attention is drawn to the point that Standley et al (WO 01/86035) has not

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been used alone, but it is a combination rejection made over Standley et al (WO 01/86035) in view of Sato et al (6,593,211) and combined teaching of Standley et al (WO 01/86035) in view of Sato et al (6,593,211) clearly teach all the limitations of claim 29.

Therefore, rejection of claims 16-27 and 29-31 are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax number for the organization where this application or proceeding is assigned is 571-272-8300.

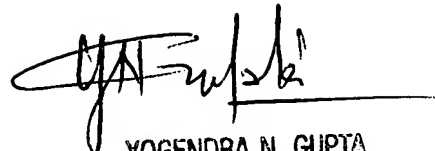
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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